

ABSTRACT

Disclosed is an integrated digital control SYSTEM and method for an automotive electrical device. The SYSTEM comprises switch means for controlling each portion of a vehicle, the switch means including switches; switch monitor means for displaying switch functions and operational states of the switches input from the switch means; switch control means for generating pulse signals corresponding to the switches operated and controlling the switch monitor means; auxiliary control means for performing input/output control, malfunction detection, automatic control, etc. of each logic-division portion; central control means for performing control of the auxiliary control means and all data; instrument panel/monitor means for performing an instrument panel simulation and applications program graphic processing according to control by the central control means; and RPM pulse generating means for providing RPM pulses to the central control means and the auxiliary control means through an RPM pulse cable. The method comprises the steps of performing logic divisions of each portion of the vehicle into predetermined regions; performing digital conversion of corresponding input/output data according to each divided region, and analyzing the input data according to region and performing integrated management into integrated

code data to control the electrical device in the corresponding region; detecting malfunctions of the electrical device in the corresponding region; and controlling the detected malfunctions in the corresponding region.